

may be formed by securing separate pieces of material to plate 40, such as by welding, in which case crease 44 would extend along the line of intersection of tab 42 and plate 40, forming tabs 42 by bending a portion of plate 40 outwardly removes the welds as a potential point of failure of plate 40. Web 46 is the portion of plate 40 which remains between tabs 42 adjacent to one another in a direction substantially perpendicular to longitudinal axis A. In the embodiment illustrated in Fig. 3, where the planes of first surface 43 and second surface 45 lie in a vertical plane, web 46 is between two vertically adjacent tabs 42. It is to be appreciated that plate 40 may be oriented in a different manner and that web 46 would lie between adjacent tabs in a direction other than vertical. It is also to be appreciated that tabs 42 may have a shape other than the substantially rectangular shape shown in Fig. [2] 3, e.g., circular, oval, or any other suitable shape which will become obvious to those skilled in the art given the benefit of this disclosure."

Please insert the following new paragraphs at Column 6, Line 13 of the Specification.

"As shown in Fig. 3, in one embodiment, crease 44 of each tab 42 is downstream with respect to the flow of the heating fluid designated as "B" in Figure 3. As shown in Fig. 3, heating fluid B is deflected by tabs 42.

As shown in Fig. 3 and as discussed herein, tabs 42 comprise portions of plate 40 which are bent outwardly away from either first surface 41 or second surface 43 of plate 40. As shown in Figs. 3 and 6-9, at least one of tabs 42 is positioned in the first portion 54 of plate 40 on one side of the longitudinal axis of plate 40 designated as "L" in Figs. 3 and 6-9 and at least one other of tabs 42 is

positioned in second portion 56 of plate 40 which is on the other side of plate 40's longitudinal axis  
L.

As shown in Figs. 3, 4, and 6-9, at least some of tabs 42 are positioned in a plurality of rows of tabs.

As shown in these Figures, in some embodiments, the rows extend in a direction substantially perpendicular to the longitudinal axis of plate 40. As shown in Figs. 3, 4, and 6-9, each row of tabs has a tab 42 positioned in first portion 54 of plate 40 and a tab 42 positioned in second portion 56 of plate 40. As shown in Fig. 3, in one embodiment, a row of tabs has a tab 42a extending outwardly away from first surface 43 of plate 40, an adjacent tab 42b extending outwardly away from second surface 45 of plate 40 and a third tab 42c which is adjacent tab 42b and which extends outwardly away from first surface 43 of plate 40. As shown in Fig. 3, other rows of tabs may have the individual tabs extending from either the first surface 43 or second surface 45.

As shown in Figs. 3 and 6-9, in some embodiments, for the purpose of describing location and distribution of invention elements, a center line of plate 40 may be located where the longitudinal axis is shown located along the center of plate 40. As shown in the figures, in some embodiments tabs 42, holes 58 and tab/hole pairs are arranged so the same are found on both sides of the center line. Further, as shown in the figures and described herein, in some embodiments these elements are also arranged symmetrically in a pattern about the center line. In such embodiments, as shown in the figures, the portion of the plate 40 referred to as first portion 54 is instead referred to as first half 54 and the portion of plate 40 referred to as second portion 56 is instead referred to as second half 56.

As shown in Fig. 3, each tab 42 is adjacent to its corresponding hole 58 in plate 40 created by bending tab 42 from plate 40. At least a portion of a side of each hole 58 is comprised of crease 44 of tab 42 that hole 58 is adjacent to. As shown in Fig. 3, crease 44 both connects tab 42 to plate 40 and is at least a portion of a side of hole 58. As shown in Fig. 3 and reflected in Figs. 4-10, tabs 42 extend outwardly from plate 40 over at least part of their adjacent corresponding holes 58. As expressly shown in Fig. 3, and as is implicit in Figs. 4-10 and the above discussion, heating fluid B is flowable through holes 58 created in plate 40 by bending tabs 42 out of plate 40. Further, in some embodiments, as shown in Fig. 3 and implicit in Figs 4-10, heating fluid B is diverted by inner surface 60 of tab 42 through tab 42's corresponding hole 58.

As shown in Figs. 3, 4, 5, and 10, the tabs 42 are not in contact with heat transfer tube 16. The baffle plate 40 is located and angled within transfer tube 16, and each of the plurality of tabs 42 on baffle plate 40 have a length and angle which positions tabs 42 relative to heat transfer tube 16 so the tabs 42 are not in contact with heat transfer tube 16. No structure is shown in this application which prevents the heated gas from flowing between the end of each tab 42 and the portion of heat transfer conduit 16 most closely adjacent to the end of each tab 42. As discussed above, the increased turbulence of flow within heat transfer tube 16 caused by the invented baffle plate improves and enhances heat transfer from the hot gases through heat transfer tube 16 into the vat containing shortening of the deep fat fryer system.

Each tab 42 and its corresponding hole 58, share a common crease 44 and are referred to herein as comprising a "tab/hole pair." As shown in Fig. 3, tab 42a and hole 58a comprise tab 42a/hole 58a

pair. Tab 42b and hole 58b comprise tab 42b/hole 58b pair. Tab 42c and hole 58c comprise tab 42c/hole 58c pair.

As shown in Fig. 3, Web 46a is the portion of plate 40 between tab 42a/hole 58a pair and tab 42b/hole 58b pair. Web 46b is the portion of plate 40 between tab 42b/hole 58b pair and tab 42c/hole 58c pair.

As shown in Figs. 3 and 6-9, each row of tabs 42, holes 58 and tab/hole pairs may be comprised of at least two tabs, two holes or two tab/hole pairs, or at least three tabs, three holes and three tab/hole pairs, or at least four tabs, four holes and four tab/hole pairs. No limit to the number of tabs, holes or tab/hole pairs in a row is shown.

As shown in Figs. 3 and 6-9, each row has  $n - 1$  webs, where  $n$  equals the number of tab/hole pairs in the row. If a row is comprised of three tabs and three holes, i.e. three tab/hole pairs, that row has two webs ( $3 \text{ tab/hole pairs} - 1 = 2 \text{ webs}$ ). If a row is comprised of four tabs and four holes, i.e. four tab/hole pairs, that row has three webs ( $4 \text{ tab/hole pairs} - 1 = 3 \text{ webs}$ ).

As shown in Figs. 3-5 and 7-10, the relationship of tabs 42 on the baffle plate 40 is to generally present alternating sizes, arrangements and angles to the flowing heated gas and alternating from extending from first surface 43 and then second surface 45, for the purpose of increasing turbulence. Some rows are presented in which tabs 42 alternately extend from the first side and second side. As shown in the figures, tabs 42 are presented which extend from the first surface of the tab preceding it